

Listing of Claims:

1. (original) A media compression method comprising:
obtaining a media signal to be communicated to a destination system;
identifying a plurality of scenes within the media signal;
automatically selecting different codecs from a codec library to respectively
compress at least two of the scenes, wherein the codecs are automatically
selected to produce a highest compression quality for the respective
scenes according to a set of criteria without exceeding a target data rate;
compressing the scenes using the automatically selected codecs; and
delivering the compressed scenes to the destination system with an indication of
which codec was used to compress each scene.
2. (original) The method of claim 1, wherein the codecs are selected from the
group consisting of discrete cosine transform (DCT) codecs, fractal codecs, and wavelet
codecs.
3. (original) The method of claim 1, wherein a first automatically selected codec
comprises a discrete cosine transform (DCT) codec and a second automatically
selected codec comprises a fractal codec.
4. (original) The method of claim 1, wherein a first automatically selected codec
comprises a discrete cosine transform (DCT) codec and a second automatically
selected codec comprises a wavelet codec.

5. (original) The method of claim 1, wherein automatically selecting further comprises:
 - identifying a plurality of characteristics of a scene; and
 - searching for a codec in the library that is associated with the identified characteristics of the scene.
6. (original) The method of claim 5, wherein the characteristics are selected from the group consisting of motion characteristics and color characteristics.
7. (original) The method of claim 6, wherein searching further comprises using an Artificial Intelligence (AI) system to locate a codec associated with the identified characteristics of a scene.
8. (original) The method of claim 7, wherein the AI system comprises a neural network.
9. (original) The method of claim 7, wherein the AI system comprises an expert system.
10. (original) The method of claim 1, wherein automatically selecting further comprises:
 - testing at least a subset of the codecs of the codec library on a scene; and

automatically selected the codec that produces a highest compression quality for the scene according to a set of criteria without exceeding the target data rate.

11. (original) The method of claim 10, wherein testing further comprises:
storing a baseline snapshot of the scene; and
for each codec to be tested:
compressing the scene at or below the target data rate using one of the
codecs in the library;
decompressing the scene using the same codec; and
comparing the quality of the decompressed scene with the baseline
snapshot according to the set of criteria.
12. (original) The method of claim 11, wherein comparing further comprises
comparing the quality according to a Peak Signal to Noise Ratio (PSNR).
13. (original) The method of claim 11, wherein comparing further comprises
comparing the quality according to a Just Noticeable Difference (JND) value.
14. (original) The method of claim 11, further comprising:
identifying a plurality of characteristics of a scene; and
associating the identified characteristics of the scene with the automatically
selected codec.

15. (original) The method of claim 1, further comprising adjusting the target data rate in response to constraints of the destination system.

16. (original) The method of claim 1, further comprising adjusting the target data rate in response to conditions of a transmission channel to the destination system.

17. (original) The method of claim 1, further comprising adjusting the target data rate in response to a message from the destination system.

18. (original) The method of claim 5, wherein searching further comprises searching for an association between the identified characteristics and a set of parameters to be used with the automatically selected codec;

wherein compressing further comprises compressing the scene using the
automatically selected codec with the associated set of parameters; and
wherein delivering further comprises delivering the compressed scene to the
destination system with an indication of which codec and which set of
parameters were used to compress the scene.

19. (original) The method of claim 10, wherein testing further comprises testing codecs of the codec library on the scene using different sets of parameters and automatically selecting the codec and set of parameters that produce a highest

compression quality for the scene according to a set of criteria without exceeding the target data rate;

wherein compressing further comprises compressing the scene using the automatically selected codec with the automatically selected parameters; and

wherein delivering further comprises delivering the compressed scene to the destination system with an indication of which codec and set of parameters were used to compress the scene.

20. (original) The method of claim 19, further comprising:

identifying a plurality of characteristics of a scene; and

associating the automatically selected codec and the automatically selected set of parameters with the identified characteristics of the scene.

21. (original) The method of claim 1, wherein identifying further comprises detecting a scene change in response to one frame of the media signal being sufficiently different from a previous frame.

22. (original) The method of claim 1, wherein identifying further comprises detecting a scene change in response to the passage of a fixed period of time.

23. (original) The method of claim 1, wherein delivering further comprises streaming each compressed scene to the destination system through a network.

24. (original) The method of claim 1, wherein delivering further comprises storing each compressed scene on a storage medium.

25. (original) The method of claim 1, wherein at least one codec in the library has an associated licensing cost, and wherein selecting further comprises automatically selecting the codec having the least licensing cost in response to two or more codecs producing substantially the same quality of compressed output for a scene.

26. (cancelled).

27. (original) A media compression method comprising:
providing a library of codecs, at least one codec having an associated licensing cost;
obtaining a media signal to be communicated to a destination system;
identifying a plurality of scenes within the media signal;
automatically selecting different codecs from the codec library to respectively compress at least two of the scenes, wherein the codecs are automatically selected to produce a highest compression quality at the lowest licensing cost for the respective scenes according to a set of criteria without exceeding a target data rate;
compressing the scenes using the automatically selected codecs; and

delivering the compressed scenes to the destination system with an indication of which codec was used to compress each scene.

28. (original) A method for communicating a media signal comprising:
selectively compressing at least two scenes of a media signal using different codecs from a codec library, wherein the codecs are automatically selected to produce a highest compression quality for the respective scenes according to a set of criteria without exceeding a target data rate;
and
delivering each compressed scene to a destination system with an indication of which codec was used to compress each scene.
29. (cancelled).
30. (cancelled).
31. (original) A media compression system comprising:
an input module to obtain a media signal to be communicated to a destination system;
an identification module to identify a plurality of scenes within the media signal;
a selection module to automatically select different codecs from a codec library to respectively compress at least two of the scenes, wherein the codecs are automatically selected to produce a highest compression quality for the

respective scenes according to a set of criteria without exceeding a target data rate;

a compression module to compress the scenes using the automatically selected codecs; and

an output module to deliver the compressed scenes to the destination system with an indication of which codec was used to compress each scene.

32. (original) The system of claim 31, wherein the codecs are automatically selected from the group consisting of discrete cosine transform (DCT) codecs, fractal codecs, and wavelet codecs.

33. (original) The system of claim 31, wherein a first automatically selected codec comprises a block codec and a second automatically selected codec comprises a fractal codec.

34. (original) The system of claim 31, wherein a first automatically selected codec comprises a block codec and a second automatically selected codec comprises a wavelet codec.

35. (original) The system of claim 31, wherein the identification module is to identify a plurality of characteristics of a scene; and

wherein the selection module is to search for a codec in the library that is associated with the identified characteristics of the scene.

36. (original) The system of claim 35, wherein the characteristics are selected from the group consisting of motion characteristics and color characteristics.

37. (original) The system of claim 36, wherein the selection module comprises an Artificial Intelligence (AI) system to locate a codec associated with the identified characteristics of a scene.

38. (original) The system of claim 37, wherein the AI system comprises a neural network.

39. (original) The system of claim 37, wherein the AI system comprises an expert system.

40. (original) The system of claim 31, wherein the selection module is to test at least a subset of the codecs of the codec library on a scene and automatically select the codec that produces a highest compression quality for the scene according to a set of criteria without exceeding the target data rate.

41. (original) The system of claim 40, wherein the selection module is to store a baseline snapshot of the scene and, for each codec to be tested, have the scene compressed at or below the target data rate using one of the codecs in the library, have

the scene decompressed using the same codec, and compare the quality of the decompressed scene with the baseline snapshot according to the set of criteria.

42. (original) The system of claim 41, wherein the selection module is to compare the quality according to a Peak Signal to Noise Ratio (PSNR).

43. (original) The system of claim 41, wherein the selection module is to compare the quality according to a Just Noticeable Difference (JND) value.

44. (original) The system of claim 41, wherein the identification module is to identify a plurality of characteristics of a scene; and

wherein the selection module is to associate the identified characteristics of the scene with the automatically selected codec.

45. (original) The system of claim 31, wherein the selection module is to adjust the target data rate in response to constraints of the destination system.

46. (original) The system of claim 31, wherein the selection module is to adjust the target data rate in response to conditions of a transmission channel to the destination system.

47. (original) The system of claim 31, wherein the selection module is to adjust the target data rate in response to a message from the destination system.

48. (original) The system of claim 35, wherein the selection module is to search for an association between the identified characteristics and a set of parameters to be used with the automatically selected codec;

wherein the compression module is to compress the scene using the
automatically selected codec with the associated set of parameters; and
wherein the output module is to deliver the compressed scene to the destination
system with an indication of which codec and which set of parameters
were used to compress the scene.

49. (original) The system of claim 40, wherein the selection module is to test the codecs of the codec library on the scene using different sets of parameters and automatically select the codec and set of parameters that produce a highest compression quality for the scene according to a set of criteria without exceeding the target data rate;

wherein the compression module is to compress the scene using the
automatically selected codec with the automatically selected parameters;
and
wherein the output module is to deliver the compressed scene to the destination
system with an indication of which codec and set of parameters were used
to compress the scene.

50. (original) The system of claim 49, wherein the identification module is to identify a plurality of characteristics of a scene; and

wherein the selection module is to associate the automatically selected codec and the automatically selected set of parameters with the identified characteristics of the scene.

51. (original) The system of claim 31, wherein the identification module is to detect a scene change in response to one frame of the media signal being sufficiently different from a previous frame.

52. (original) The system of claim 31, wherein the identification module is to detect a scene change in response to the passage of a fixed period of time.

53. (original) The system of claim 31, wherein the output module is to stream each compressed scene to the destination system through a network.

54. (original) The system of claim 31, wherein the output module is to store each compressed scene on a storage medium.

55. (original) The system of claim 31, wherein at least one codec in the library has an associated licensing cost, and wherein the selection module is to automatically select the codec having the least licensing cost in response to two or more codecs producing substantially the same quality of compressed output for a scene.

56. (cancelled).
57. (original) A media compression system comprising:
- a library of codecs, at least one codec having an associated licensing cost;
 - an input module to obtain a media signal to be communicated to a destination system;
 - an identification module to identify a plurality of scenes within the media signal;
 - a selection module to automatically select different codecs from the codec library to respectively compress at least two of the scenes, wherein the codecs are automatically selected to produce a highest compression quality at the lowest licensing cost for the respective scenes according to a set of criteria without exceeding a target data rate;
 - a compression module to compress the scenes using the automatically selected codecs; and
 - an output module to deliver the compressed scenes to the destination system with an indication of which codec was used to compress each scene.
58. (original) A system for communicating a media signal comprising:
- a compression module to selectively compress at least two scenes of a media signal using different codecs from a codec library, wherein the codecs are automatically selected to produce a highest compression quality for the

respective scenes according to a set of criteria without exceeding a target data rate; and
an output module to deliver each compressed scene to a destination system with an indication of which codec was used to compress each scene.

59. (cancelled).

60. (cancelled).

61. (currently amended) ~~A computer program product on a computer-readable medium~~ encoded with computer-executable instructions, comprising:

program code for obtaining a media signal to be communicated to a destination system;

program code for identifying a plurality of scenes within the media signal;

program code for automatically selecting different codecs from a codec library to respectively compress at least two of the scenes, wherein the codecs are automatically selected to produce a highest compression quality for the respective scenes according to a set of criteria without exceeding a target data rate;

program code for compressing the scenes using the automatically selected codecs; and

program code for delivering the compressed scenes to the destination system with an indication of which codec was used to compress each scene.

62. (original) A media compression apparatus comprising:
means for obtaining a media signal to be communicated to a destination system;
means for identifying a plurality of scenes within the media signal;
means for automatically selecting different codecs from a codec library to
respectively compress at least two of the scenes, wherein the codecs are
automatically selected to produce a highest compression quality for the
respective scenes according to a set of criteria without exceeding a target
data rate;
means for compressing the scenes using the automatically selected codecs; and
means for delivering the compressed scenes to the destination system with an
indication of which codec was used to compress each scene.
63. (cancelled).
64. (original) A media compression method comprising:
obtaining a media signal to be communicated to a destination system;
identifying a plurality of scenes within the media signal;
automatically selecting different codecs from a codec library to respectively
compress at least two of the scenes, wherein the codecs are automatically
selected to produce a highest compression quality for the respective
scenes according to a set of criteria without exceeding a target data rate;
compressing the scenes using the automatically selected codecs;

delivering the compressed scenes to the destination system with an indication of
which codec was used to compress each scene;
receiving each compressed scene and indication of a codec at the destination
system;
decompressing each compressed scene using the indicated codec; and
presenting the decompressed scenes to a user of the destination system.